

**FY2010 Department of Defense
Federal Funding Authorization Requests
Senator Kirsten Gillibrand**

Arsenal Business & Technology Partnership – Arsenal Support Program Initiative (ASPI); Watervliet, NY; \$12,000,000

This project will continue funding of the ASPI, an eight year old program that funds building renovations, site planning, job training and marketing programs designed to attract private businesses to use underutilized facilities at Army arsenals including the one at Watervliet, NY. These efforts support the Headquarters, US Tank-Automotive and Armaments Command initiative to reduce Industrial Mobilization Capacity costs, enhance essential skills and support infrastructure improvements. This project is estimated to create approximately 300 jobs.

Benet Army Laboratories – Factory of the Future - Watervliet Arsenal; Watervliet, NY; \$3,500,000

This project will facilitate a seamless and accelerated incorporation of advanced materials and process technologies into next generation weapon systems by developing and implementing state of the art manufacturing principles and equipment above and beyond the shop floor environment for existing weapons manufacturing. Funds will be disbursed to enhance existing infrastructure and apply state of the art technologies and equipment toward the developments in advance materials and processes in next generation weapon system design. This project is estimated to create approximately 20 jobs.

Binghamton University – Supercapacitors for Integrated Power Storage; Binghamton, NY; \$5,000,000

This project will be conducted through the Center for Autonomous Solar Power (CASP) at Binghamton University, which is researching and developing 3rd generation large area, flexible, light weight solar cells to meet scientific challenges in reducing the cost of solar power and enhancing energy efficiency. The supercapacitors for integrated power storage research focuses on developing new materials to push ultracapacitors to new performance levels, improving the power density and/or energy density of capacitive energy storage devices. Because the electrical energy needs of the modern military operations are significant and diverse, this research will create a more rational power distribution system for the DoD. This project is estimated to create approximately 100 jobs.

Clarkson University – Cyber Attack and Security Environment; Potsdam, NY; \$5,000,000

This project will conceptualize and demonstrate the technologies necessary to systematically coordinate, plan, and execute offensive cyber campaigns, determine effects associated with an offensive cyber weapon, monitor/evaluate events that occur in cyberspace, and ultimately achieve situational awareness of cyberspace with an overall goal of achieving dominance within that critical realm. Alpha and beta testing throughout the lifecycle of this project will occur at a secure military installation in upstate New York. Clarkson University's engineering and science faculty will provide subject matter expertise while expanding their involvement in cybersecurity

research. Operating effectively in cyberspace requires a Cyber Command and Control (CC2) system to synchronize cyber attack operations, facilitate analysis of attack results including measures of effectiveness, and deconflict friendly use of cyberspace. This project is estimated to create approximately 30 jobs.

College of Agriculture & Tech – Cobleskill – SUNY Cobleskill Biowaste-to-Bioenergy Center; Cobleskill, NY; \$4,650,000

This project will support the SUNY Cobleskill Bioenergy Research Center's development of clean liquid and gas fuels through conversion of animal and municipal solid waste, with development of mobile technology for military application in the field. Development and deployment of this technology will enhance the armed services' ability to produce its own energy on bases, while mobile technology will save lives and lower the danger to our troops by reducing the need to transport waste and fuels to and from installations in theater. This project is estimated to create approximately 8 jobs.

Cooper Union for the Advancement of Science & Art – Untethered Data Link for use in Simulation Environment project (ViFi-GT); New York, NY; \$3,000,000

This project will develop the technology to employ the next generation of virtual reality training of personnel by allowing the user to train in a completely wireless and highly realistic environment. Cooper Union will further develop the technology for this Phase II SBIR project by utilizing Cooper Union's new technology development center called the "Advanced Technology Wireless Center of Excellence." This project is estimated to create approximately 20 jobs.

CUBRC – Automated Sample Preparation (ASP) for Biological Detection; Buffalo, NY; \$6,000,000

This project will fund the advancement and the development and testing of a prototype ASP system and expand the list of biological agents that can be detected. The ASP has the ability to process both environmental and clinical biological samples for subsequent analysis on both nucleic acid and/or immunoassay detection/diagnostic systems and when mated to currently fielded and new detection systems will enhance warfighter capability to detect and identify hundreds of potential targets simultaneously within a single analysis on a single detection/diagnostic platform. This project is estimated to create approximately 10 jobs.

Hauptman Woodward Medical Research Institute – Identification of New Drug Targets in Multi-Drug Resistant Bacterial Infections; Buffalo, NY; \$4,320,000

This project will address the recent rapid increase of severe opportunistic post-wound infections in the warfighter caused by the drug and multi-drug resistant bacteria *Acinetobacter baumannii*. The project will identify new antibacterial drug targets and develop novel lead drug compounds with the goal of acquiring effective treatments against difficult and dangerous infections. This project is estimated to create approximately 12 jobs.

Infotonics Technology Center – Smart Prosthetics Research; Canandaigua, NY; \$5,000,000

This project will bring the most advanced microsystem sensor technology to improve the health and quality of life of active service personnel, veterans and others who have suffered from limb loss and disability. These afflictions affect millions of people worldwide as a result of arterial

disease, arthritis, diabetes, trauma, congenital limb deficiency, cancer, and other causes. Limb loss alone affects over one million people in the United States, with an average of approximately 200,000 amputations carried out each year. Our recent wars in Iraq and Afghanistan have unfortunately added to these numbers; they have produced the highest rate of limb amputations per injury of any war on record. This project is estimated to create approximately 60 jobs.

New York National Guard Joint Force HQ – Outfit (5) C-130s at Stratton ANGB with 8 bladed propeller; Scotia, NY; \$8,500,000;

This project will improve performance of its assigned aircraft to execute high altitude, deep field polar missions. The NP-2000 propeller system provides improved performance capability, provides better fuel efficiency and increases maintenance reliability than the existing propeller system. The 109th requests that 5 of their assigned aircraft be fitted with the NP-2000 propeller system.

New York National Guard Joint Force HQ – Additional Civil Support Team; Brooklyn, NY; \$750,000

This project will provide funding while the National Guard works to get the Department of Defense to authorize 2 Civil Support Teams for New York State. For the last 7 years, the New York National Guard has supported a federal initiative to establish an additional Civilian Support Team that would be located in the New York City metropolitan area. The team would provide additional support for emergency preparedness. This project is estimated to create approximately 22 jobs.

New York Structural Biology Center – Research of Chem/Bio Warfare Agents; New York, NY; \$2,600,000

The project will build a next-generation synchrotron beamline and end (experimental) station with unique capabilities for initial use at the existing National Synchrotron Light Source (NSLS). The end station will then be installed at the 4th-generation synchrotron, NSLS-II, currently in development at Brookhaven National Laboratory. The proposed beamline/end station will provide critically important research capabilities to a large, eminent group of scientists engaged in biological research affecting the health of US citizens. The project will study a wide range of molecules whose activities are implicated in deadly viruses and diseases including weapons of biological warfare and to fast track therapies to biological threats as they emerge. This project will provide a window for US companies to become competitive in this market and to develop state-of-the-art equipment that can be then marketed to Europe and Asia. This project is estimated to create approximately 8 jobs.

Rochester Institute of Technology – Defense Modernization and Sustainment Initiative; Rochester, NY; \$8,000,000

This project will provide research to improve the modernization, readiness and sustainment of defense systems by developing processes and tools to track the status and future health of defense systems; detect, diagnose and repair material aging failures; and provide decision support systems for use in determining when and how to upgrade these systems. This project is estimated to create approximately 6 jobs.

Stony Brook University – Nanotechnology for Next Generation Portable Power; Stony Brook, NY; \$3,000,000

This project will develop protocols for wireless beamed power that will remotely charge these power storage and wireless redistribution systems. These nanostructured materials increase efficiency and enables the use of safe levels of transmitted radio frequency energy at available bands. These devices can be charged and interrogated at the same time. This method provides for energy delivery which can be made addressable, encrypted, secure, and reliable. This project is estimated to create approximately 20 jobs.

SUNY Institute of Technology – Cyber Security Curriculum & Laboratory Development Initiative; Utica, NY; \$750,000

This project will allow the Department of Computer and Information Sciences at SUNY Institute of Technology (SUNYIT) to spearhead new curriculum developments in the area of Cyber Security. This program targets critical workforce development needs in the Utica-Rome and Central New York region, especially the local workforce at the Air Force's (AF) Information Directorate, headquartered in Rome, NY. This project is estimated to create approximately 5 jobs.

SUNY Upstate Medical University – Drug & Vaccine Development for Force Protection; Syracuse, NY; \$840,000

This project will support focused research that provides for protection of military personnel against endemic infectious diseases in regions where they may be deployed. Funding will protect Soldiers for the Future Force from infection and sustain operating by preventing hospitalizations and evacuations for the theater of operations. Work in this project would be performed by the Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD, and its overseas laboratories, in coordination with the core facilities at SUNY Upstate Medical University that have the capacity and potential to screen new drugs and vaccines against these diseases. This project is estimated to create approximately 3 jobs.

Syracuse Research Corporation – Enhanced Multi-Mission Radar; Syracuse, NY; \$6,000,000

This project will allow the Syracuse Research Corporation to continue to develop and demonstrate the Enhanced Multi-Mission Radar prototype based on the U.S. Army's latest Multi-Mission Radar (MMR) and Counter-Rocket, Artillery, and Mortar (C-RAM) user requirements. It will continue development and demonstration of the EMMR's capability to perform multiple simultaneous missions, as well as detecting and locating long-range and low quadrature elevation rockets targeting the warfighter today in Afghanistan. These extended capabilities will reduce the multiple radar sensors currently required to perform the capabilities of a single EMMR, while increasing operational flexibility and reducing logistical support and training costs. This project is estimated to create approximately 5 jobs.

Trudeau Institute – US Navy Pandemic Influenza Vaccine Program; Saranac Lake, NY; \$8,000,000

This project will expand current efforts by assessing the efficacy of combining influenza vaccination with antiviral prophylaxis. Investigators at Trudeau will study the impact of antivirals on the generation of immunological memory in an animal model following influenza

vaccination. They will conduct a randomized, placebo-controlled study of TCAD administered in combination with seasonal influenza vaccination, with the objective to reduce the incidence of influenza disease. This project is estimated to create approximately 75 jobs.

University of Rochester – Center for Neurotrauma Research; Rochester, NY; \$6,000,000

This project will enable development of potentially transformative interventions for treatment of traumatic injury to the nervous system by integrating multiple leading efforts. Using cutting-edge surgical techniques, the funding will be used to implement an array of new-age cell therapy procedures including cell replacement and a number of pharmacological interventions that prevent cell death as well as enhance neural plasticity. This project is estimated to create approximately 20 jobs.

Webb Institute – Webb Institute Ship Model Testing Facility; Glen Cove, NY; \$7,000,000

This project will fund the construction of a new, modern ship model testing facility at Webb Institute in Glen Cove, NY. Ship model towing tanks are the signature experimental facilities of naval architecture, having both significant historical and current technical value in understanding and quantifying the hydromechanics of ships and ocean-based systems of all sorts. This project is estimated to create approximately 20 jobs.